



PATENT  
Atty. Docket No. SNS-007A

RECEIVED  
JUN 20 2001  
TELETYPE CENTER 2800

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Rodomista et al.  
SERIAL NUMBER: 09/356,119 GROUP NUMBER: 2837  
FILING DATE: July 16, 1999 EXAMINER: P. Ip  
TITLE: Force Reflecting Haptic Interface

#13/Response  
As per  
6/21/01

RESPONSE

This paper is submitted in response to an Office Action, Paper No. 9, mailed from the U.S. Patent and Trademark Office on January 12, 2001, for which the period for response was set to expire on April 12, 2001, and which has been extended to June 12, 2001, by the enclosed Petition for Extension of Time for two months. Please consider the following remarks.

REMARKS

1. The specification is objected to under 37 CFR 1.71 for the following reasons stated in the Office Action: the recitation of "an automatic work volume" is confusing; it is not understood what/how the work volume is meant, measured, or calibrated; and it is not understood what/how the haptic interface is meant in the specification. Also, claims 24-31 are rejected for the same reasons. Applicants respectfully traverse the objections to the specification and the rejection of claims 24-31.

The terms work volume and workspace volume are used throughout the specification according to their ordinary meaning, e.g., to represent the geometric envelope within which the user/haptic interface operates throughout the full range of motion of the movable axes of the interface. McGraw-Hill Dictionary of Scientific and Technical Terms, Fifth Edition © 1994, defines "working space-volume" as the "volume enclosed by a robot's working envelope." In addition, The American Heritage Dictionary of the English Language, Third Edition © 1996, 1992, defines "volume" as "the amount of space occupied by a three-dimensional object." Copies of the relevant pages are attached.

As recognized by those skilled in the art, the work volume recited in the present application is the geometric envelope within which the user/haptic interface operates, which corresponds to the virtual equivalent represented digitally on the computer display. See generally, page 2, lines 3-7, page 4, line 1-4, and page 19, lines 3-7, of the specification. See